



Continuing Education Programme



on

SMARTnet – Non-Engineered Seismic Design 2.0

November 07 – 08, 2022

Coordinator

Dr. Vaibhav Singhal, IIT Patna

**Dr. Martijn Schildkamp, Smart Shelter Research,
The Netherlands**

Organized by

**CENTRE FOR EARTHQUAKE ENGINEERING RESEARCH
and**

SMART SHELTER RESEARCH, THE NETHERLANDS

**Department of Civil and Environmental Engineering,
Indian Institute of Technology Patna**

Important Dates

Workshop dates: November 07-08, 2022

Last date of Registration: November 02, 2022

OVERVIEW

'Non-Engineered' refers to traditional, vernacular and informal construction practices, which generally do not behave well in earthquakes as underlined by the widespread disasters in Pakistan, India, Haiti, Turkey, Iran and Nepal. However, due to insufficient knowledge and resources, combined with non-availability and/or enforcement of clear technical guidelines and up-to-date codes, these practices remain to be the standard in many regions worldwide.

An important question is how we can progress beyond the existing (and often-outdated) empirical design rules-of-thumb, and significantly strengthen the seismic performance of these techniques?

How can we improve the quality of local construction practices and effectively implement national standards? These key questions have not been adequately addressed to date.

AIMS AND OUTCOMES

- Create awareness about the need for improving the seismic behaviour of alternative and traditional construction techniques;
- Discuss possible strategies to drastically improve the resilience of such techniques for the developing context (which are applicable in contemporary western construction as well);
- Development of solutions for testing and determination of material properties of vernacular techniques, including parameters for local materials and workmanship;
- Discuss references and similarities with the local Indian and Himalayan contexts, as well as benefits for the development of state-of-the-art models for contemporary materials and techniques.

TARGET PARTICIPANTS

Workshop is open to research scholars/postgraduate students from all Institutes, Universities and Engineering colleges and practicing engineers from Industries and Government Department.

COURSE CONTENT

- Behaviour of Structures in Past Earthquakes
- Traditional building materials used for the construction
- Construction of earthquake resistant masonry houses in hilly regions.
- Seismic Design and Detailing of Confined Masonry Buildings
- Traditional and Non-Engineered seismic design principles
- SMARTnet: State-of-the-Art and International Call to Action

RESOURCE FACULTY:

- Prof. Hemant B Kaushik, IIT Guwahati
- Dr. Vaibhav Singhal, IIT Patna
- Dr. Martijn Schildkamp, Smart Shelter Research

REGISTRATION

- The interested participants are required to fill the following Google Form for registration before 02nd Nov. 2022.

<https://forms.gle/eefGbx5dDQCYCFEW6>

PROGRAMME FEES

- Undergraduate/Post graduate scholars- INR 1500.00
- Research Scholars (PhD)- INR 2000.00
- Professionals (academia/industry)- INR 5000.00

The course fee will cover lecture notes, refreshments and lunch during the classes. Board, lodging and travel charges will have to be borne by the participants. Participants who successfully complete the course will be awarded a certificate.

For any query please write to:

sonali_2021ce21@iitp.ac.in

ceer.iitp@gmail.com